Portage Creek Area
Time Critical Removal Action

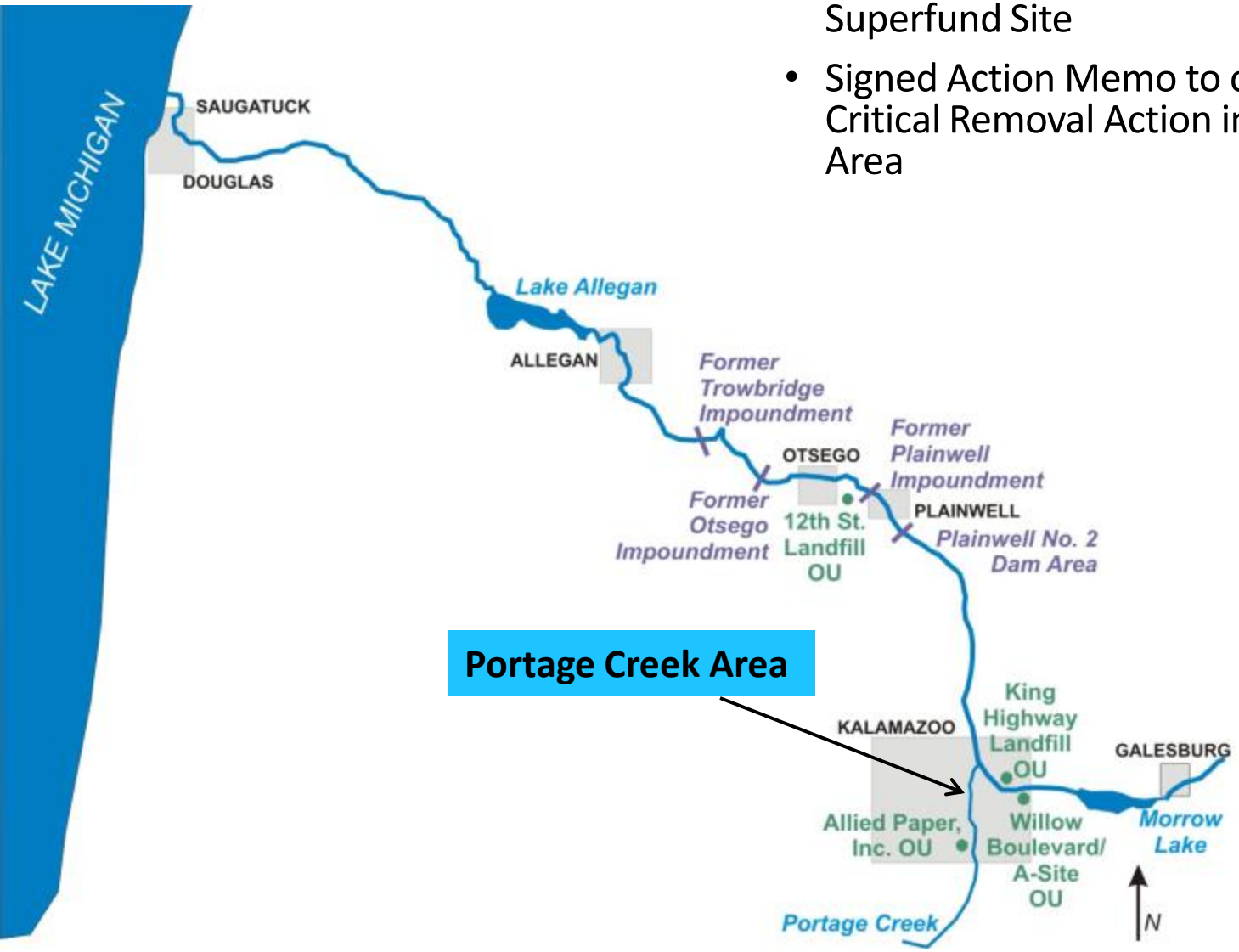
Progress Update

Public Meeting

5/31/2012

Overview

- Portage Creek Area is part of the Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site
- Signed Action Memo to complete a Time-Critical Removal Action in the Portage Creek Area



Investigation Results

- 1993-2000 Remedial Investigation/Feasibility Study (RI/FS)
  - Series of transects sampled
  - Highest PCB concentration 79 mg/kg
- 2008 Supplemental RI/FS
  - Target sediment probes and depositional features
  - Highest PCB concentration 300 mg/kg
- 2010 MDNRE (now MDEQ)sampling
  - Define hotspots
  - Highest creek sediment PCB concentration 590 mg/kg
  - Highest floodplain PCB concentration 72 mg/kg

Cleanup Performance Standards/Goals (Standard 10 mg/kg for both sediment and floodplain soil)

- In-stream sediment goal = 1 mg/kg with 6” over-dredge
  - SA6 confirmatory samples (5 taken) to date < 1 mg/kg
  - Range non-detect to 0.87 mg/kg
- Floodplain soil goal = 5mg/kg with 6” over-dredge
  - All SA7 confirmatory samples (5 taken) < 5 mg/kg
  - Range non-detect to 1.26 mg/kg
- Approximately 17,000 yd^3
- Dredge depths range 12” – 56” over entire area

Command Post

Office trailers

De-watering / transfer pad

Equipment Staging

EPA's Mobile Wastewater Treatment Plant

‘Springfield Belle’ Wastewater Treatment Plant

Staging / De-watering Pad

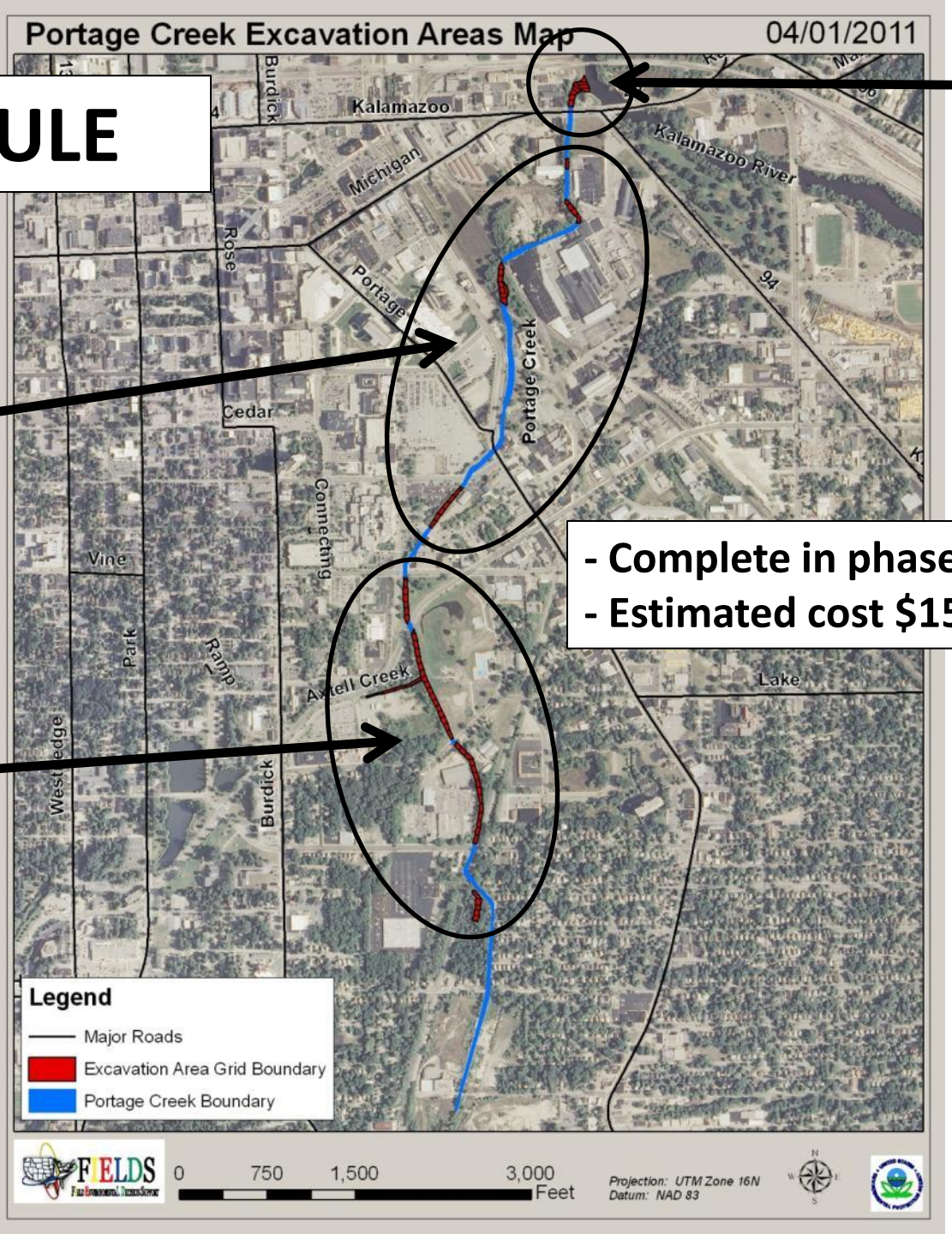
SCHEDULE

2014
SA1-A

2013
SA5-A&B
SA3-A&B
SA1-B&C

2012
SA7
SA6
Axtell Creek
SA5D&C

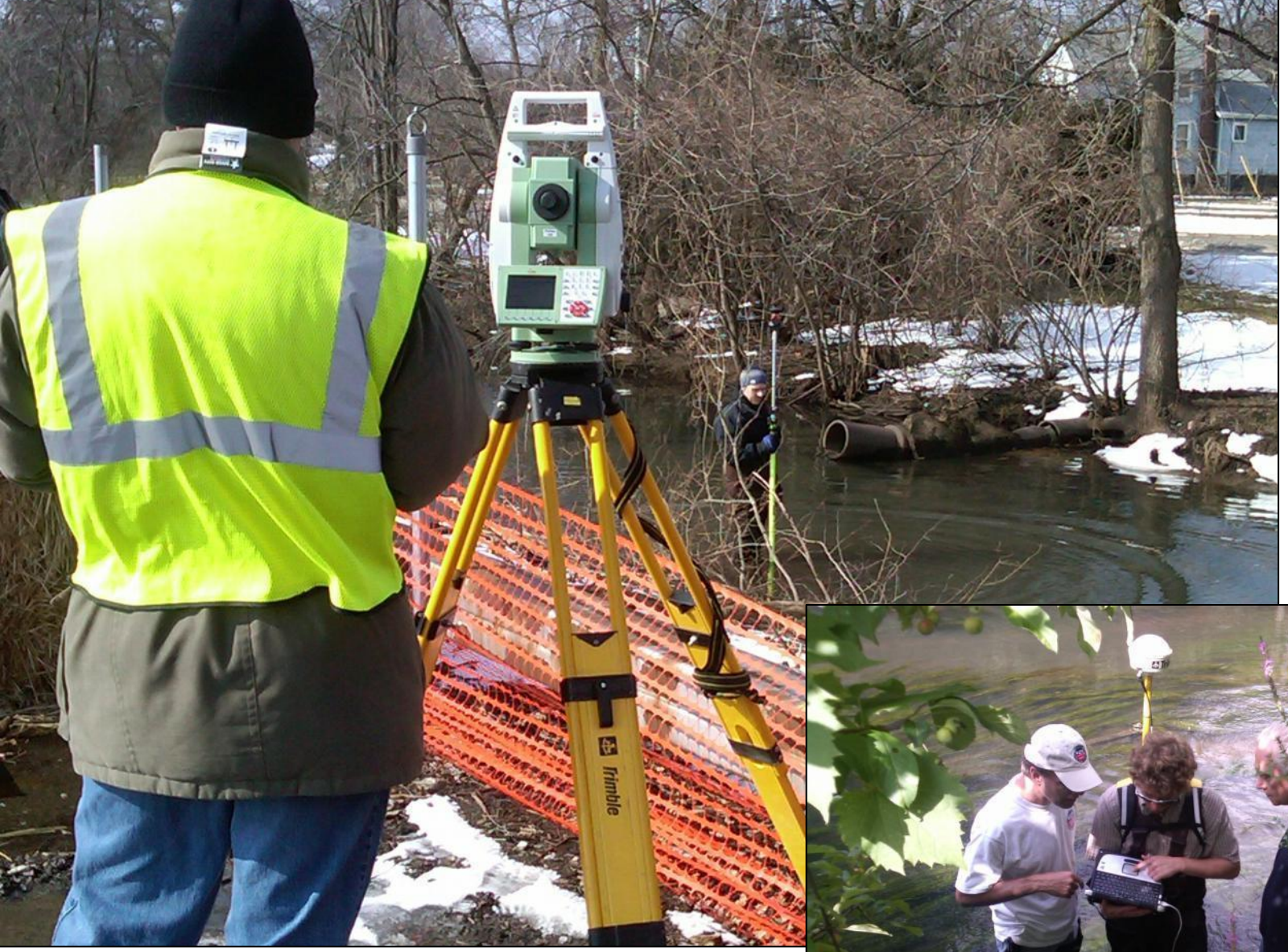
- Complete in phases over 2-4 yrs
- Estimated cost $15.8m



Operations Overview

Site Preparation

- Clear & grub for access
- Pre-survey (structural feature, engineering, precondition photo documentation, topographic/bathymetric)
- Data gap sampling (sediments, UpJohn Park, etc.)
- Access
- Area-specific controls (security, environmental, H&S)
- Isolation
    - Task 1- Cofferdam construction
    - Task 2- By-pass pumping ongoing during removal
    - Task 3- Excavation area dewatering and water treatment



Pre-survey

Operations Overview (cont)

Contaminated sediment removal

- Preliminary solidification/Load & transfer sediment to dewatering pad
- Final stabilization/solidification/prep for shipment
- Load out for disposal (subtitle D, or TSCA landfill)
- Verification sampling/re-excavate and resample as needed
- Post removal survey (Structural feature, Topographic/bathymetric)

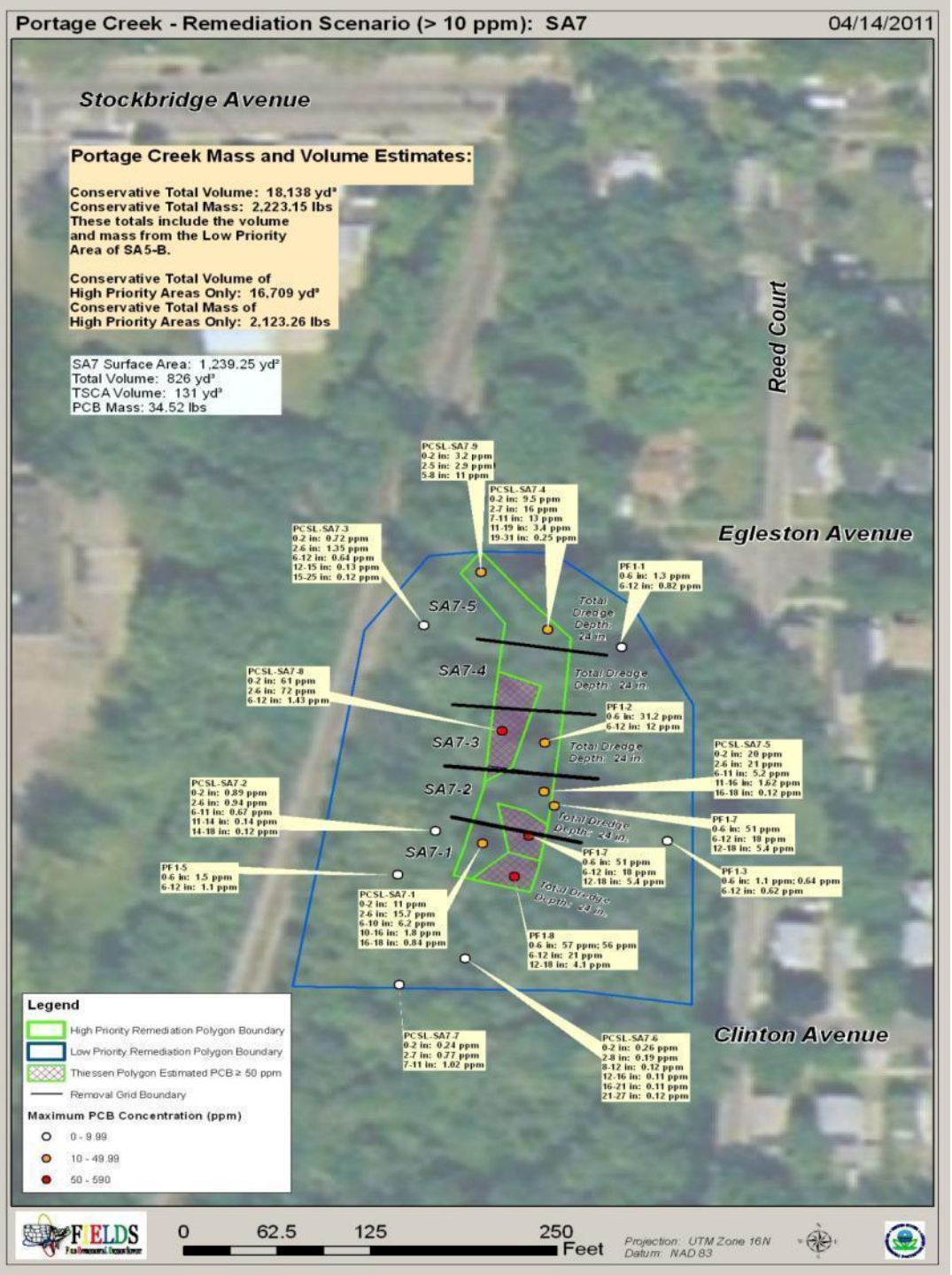
Operations Overview (cont.)

Site Restoration

- Backfill stream channel/bank
- Cofferdam removal
- Removal area restoration planting
- Infrastructure restoration activities (fence replacement, asphalt repairs, etc.)
- Remove sediment erosion controls after re-vegetation
- Post condition documentation

SA7

Forested wetland between Stockbridge Ave. & Reed St.



Staging Area
423 Reed St

Delayed Start – Winter 2011


Access Road
03/29/2012 18:13


Air Monitor at SA7
03.27.2012 08:23

Excavation

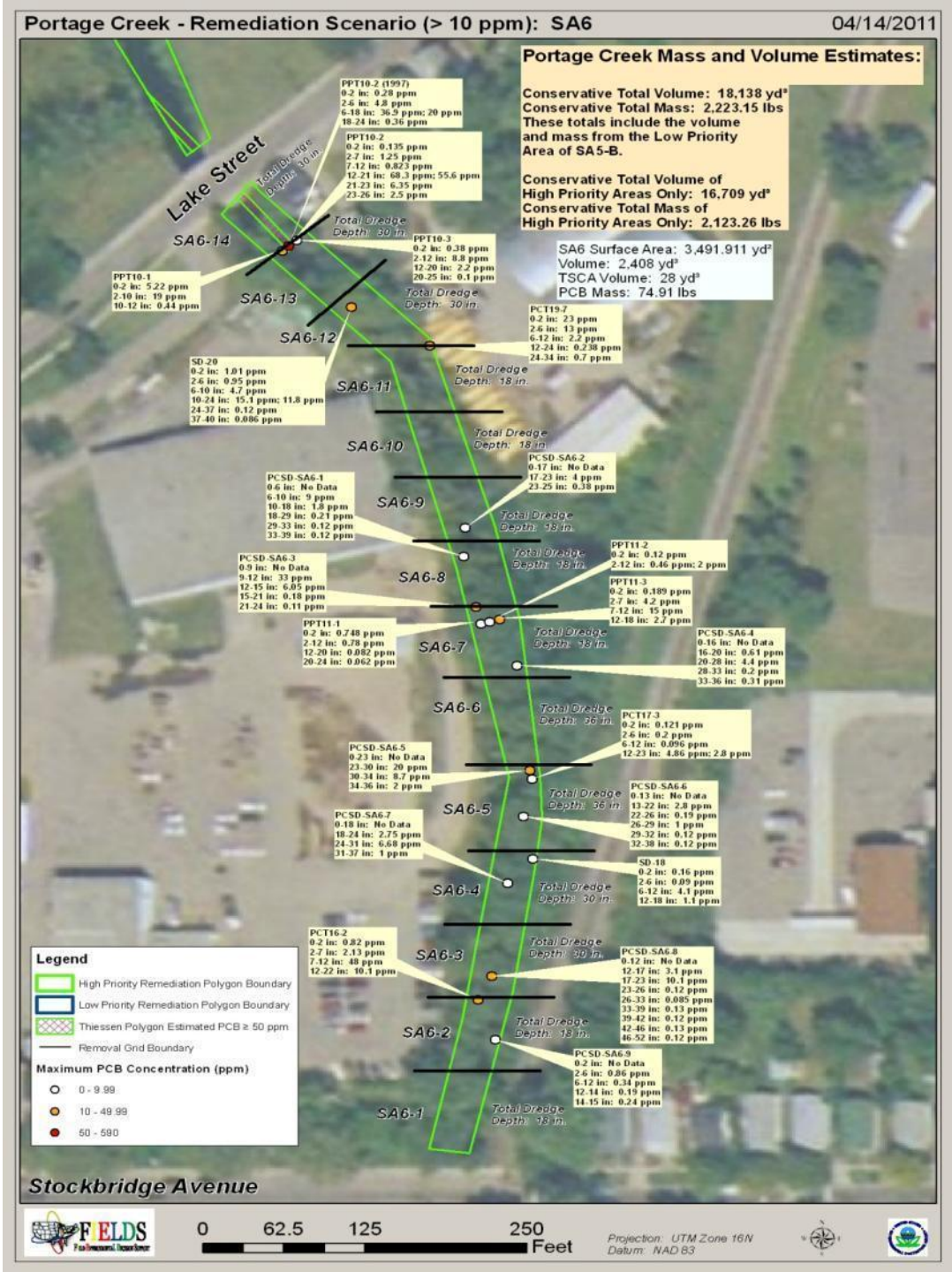
March / April 2012

Approximately 1,000 yards soil removed


May 27
05/27/2012 11:24

SA6

Stockbridge Ave to Lake Street



Work Area Preparation

Clearing / Grubbing
&
Mat
Placement

Creek Bypass Pump System

Groundwater De-watering System

Creek Water Quality Monitoring

(1 upstream, 2 downstream monitors)

Excavation

Solidification / Load out

Truck tires washed before driving onto Stockbridge Ave.

John Street Staging Pad

> 50ppm – EQ (Detroit)
< 50ppm - C&C Landfill (Marshall)

Backfilling

Backfilling / Restoration

Coir Log installation at SA-6

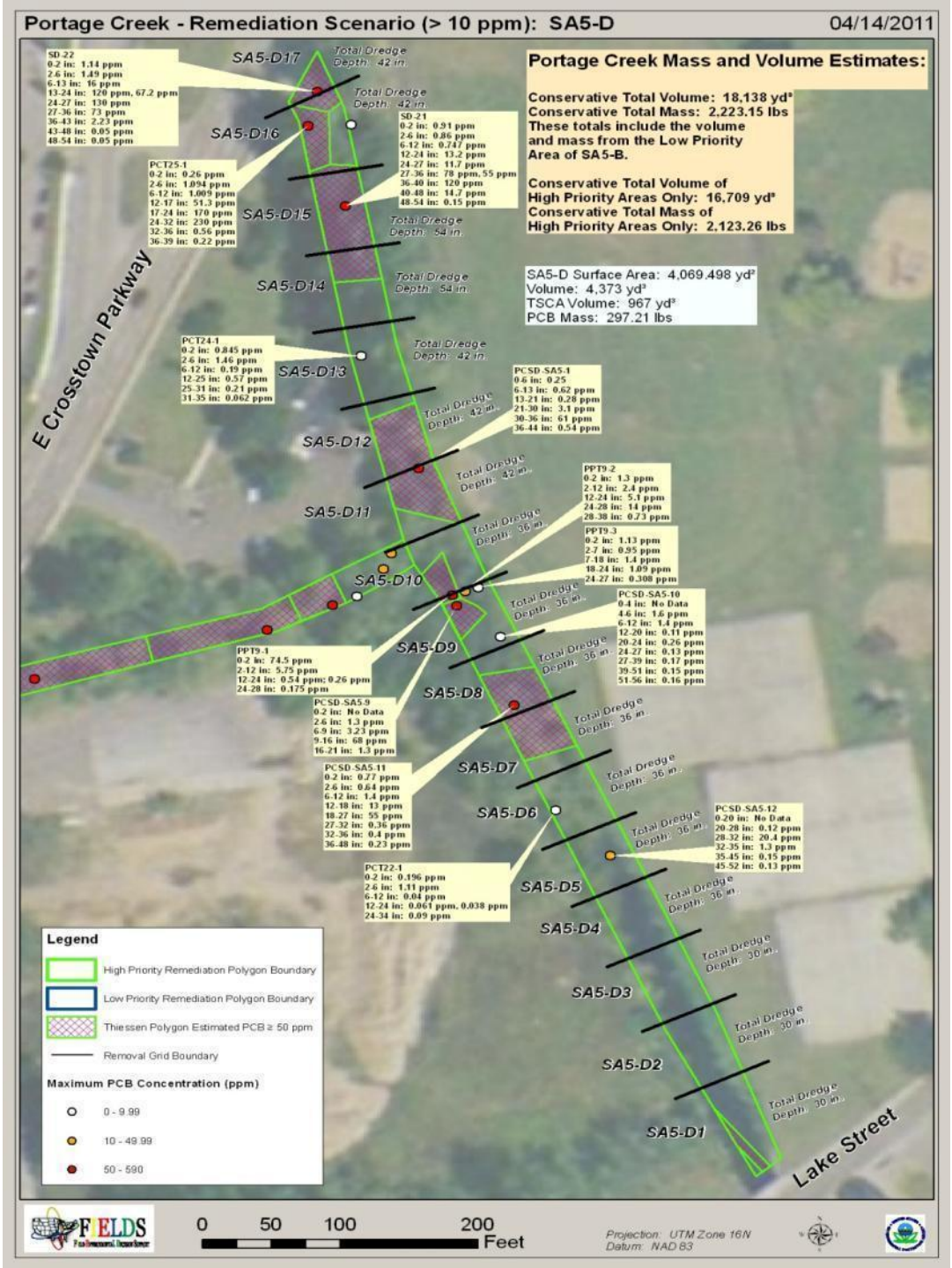
Axtell Creek – John Street to Portage Creek

Site Preparation

(Excavation in July)

SA5-D (Upjohn Park area)

E. Crosstown Pkwy to Lake Street

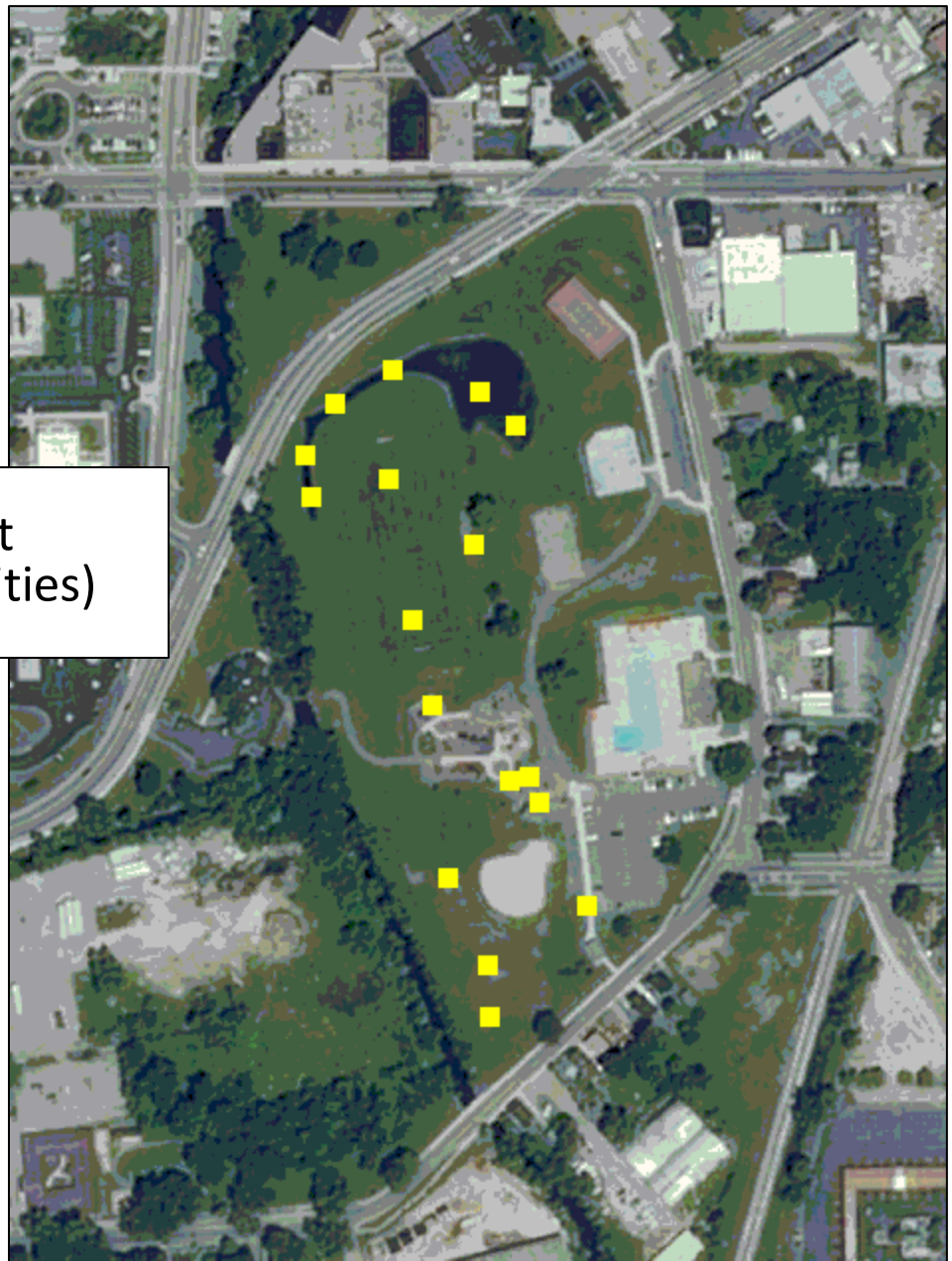


Site Preparation

(Excavation in August)

Upjohn Park Sampling

All results were non-detect
(below lab instrument capabilities)

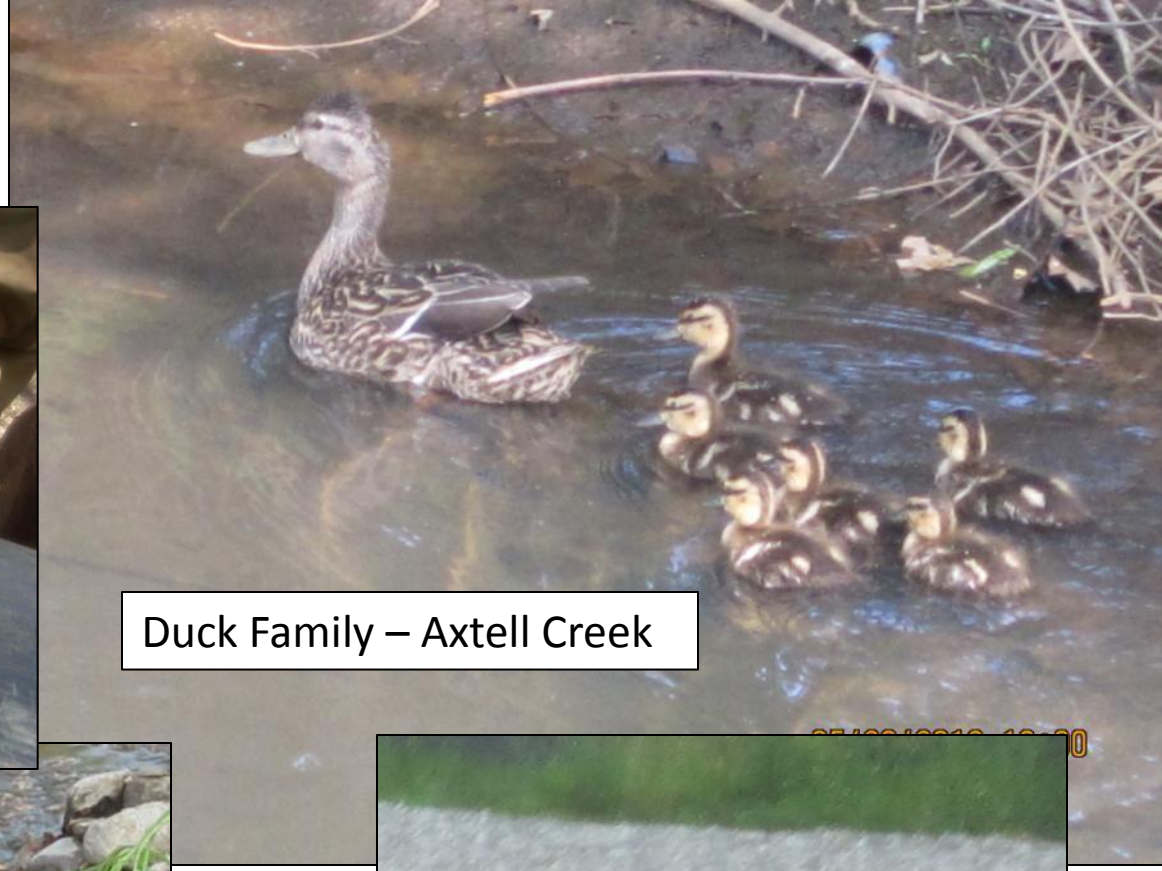


Project Partners

- State of Michigan
- City of Kalamazoo
  - Dept. of Public Services
  - Community Planning & Development Dept.
  - Economic Development Dept.
  - Parks & Recreation Dept.
  - School District
  - Tree Committee
- Kalamazoo
  - Nature Center
  - River Cleanup Coalition
  - River Watershed Council
- U.S. Fish & Wildlife Service, NOAA
- Others
  - Private property owners
  - Utilities (railroad, power, phone, gas)
  - Wildlife

“Other” Partners

Big Daddy – SA6



Duck Family – Axtell Creek

Billy the Beaver – SA6

Musky the Muskrat – John St

Work Crews

Questions ?

www.epaosc.org/portagecreekarea

-POLREPs (approximately every 2 weeks)
- Bulletins / Pictures / Documents / Contacts

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